NDA-CDS-AFCAT 2024

BIOLOGY

ANIMAL GROWTH

The Functional Unit Of Muscle Contraction Is

a) A Band

b) Myofibril

c) Sarcomere

d) More than one of the above

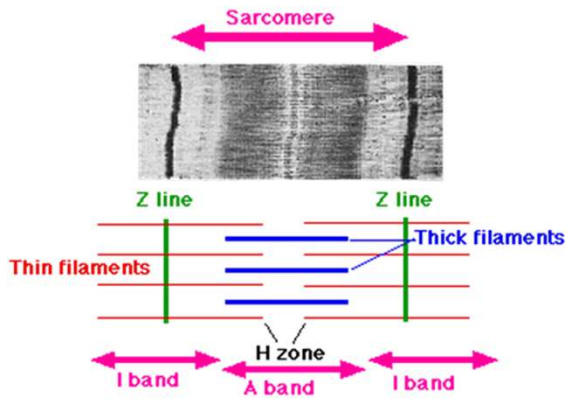
The Functional Unit Of Muscle Contraction Is

a) A Band

b) Myofibril

c) Sarcomere

d) More than one of the above



- The area between two Z-line is Sarcomere and It is considered as the functional unit of contraction and is called a sarcomere.

A Tissue Is A Group Of _____ Cells Performing A _____ Function.

a) Different, different

b) Similar, similar

c) Different, specific

d) Similar, different

A Tissue Is A Group Of _____ Cells Performing A _____ Function.

a) Different, different

b) Similar, similar

c) Different, specific

d) Similar, different

- A group of similar cells performing similar functions is known as tissue.
- A tissue is an ensemble of similar cells and their extracellular matrix from the same origin that together carry out a specific function.

The Tissue That Has Cilia On The Outer Surface And Whose Movement Pushes The Mucus Forward Is The _____ Epithelial Tissue.

a) stratified

b) columnar

c) squamous

d) glandular

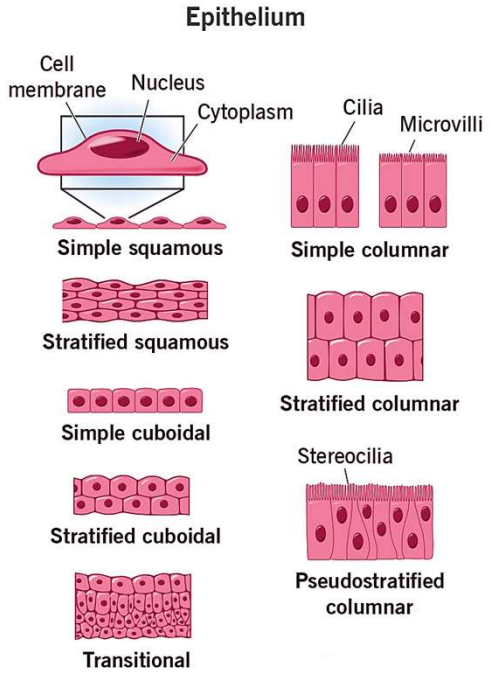
The Tissue That Has Cilia On The Outer Surface And Whose Movement Pushes The Mucus Forward Is The _____ Epithelial Tissue.

a) stratified

b) columnar

c) squamous

d) glandular



Name The Special Type Of Connective Tissue, Present In Our Nose, Ear, Trachea And Larynx, Which We Can Fold:

a) Cartilage

b) Tendon

c) Ligament

d) Bone

Name The Special Type Of Connective Tissue, Present In Our Nose, Ear, Trachea And Larynx, Which We Can Fold:

a) **Cartilage**

b) Tendon

c) Ligament

d) Bone

This tissue is present in joints, ears, nose, rib cage, and in many other areas of the body

Areolar Connective Tissue Is Not Found In-

a) between the teeth and gums

b) between internal organs

c) around blood vessels

d) More than one of the above

Areolar Connective Tissue Is Not Found In-

a) **between the teeth and gums**

b) between internal organs

c) around blood vessels

d) More than one of the above

- Areolar connective tissue is found between the skin and muscles, blood vessels and nerves, and bone marrow.

Which Of The Following Classes Of Animal Has/Have A Two-chambered Heart?

a) Pisces

b) Amphibia and Reptilia

c) Reptilia only

d) Amphibia only

Which Of The Following Classes Of Animal Has/Have A Two-chambered Heart?

a) **Pisces**

b) Amphibia and Reptilia

c) Reptilia only

d) Amphibia only

- Pisces have a two-chambered heart that has one auricle and one ventricle.
- Fish have a single circuit for blood flow and a two-chambered heart that has only a single atrium and a single ventricle.

Which Tissue Acts As First Line Of Protection For Body From Any Physical Or Chemical Damage?

a) Adipose Tissue

b) Epithelial Tissue

c) Muscular Tissue

d) Areolar Tissue

Which Tissue Acts As First Line Of Protection For Body From Any Physical Or Chemical Damage?

a) Adipose Tissue

b) Epithelial Tissue

c) Muscular Tissue

d) Areolar Tissue

- They cover all the outer surfaces of the body.
- They are the first line of protection from any physical or chemical damage.
- The outermost layer of the skin, the epidermis is an example of this tissue.

Which Among The Following Is NOT The Characteristic Feature Of Smooth Muscle Fibres?

a) They bear a central single nucleus

b) These fibres are cylindrical in shape

c) They are present in internal organs

d) They are involuntary in nature

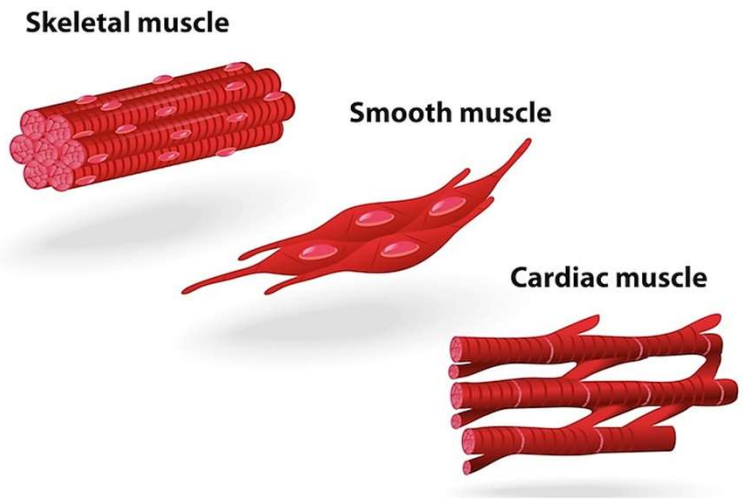
Which Among The Following Is NOT The Characteristic Feature Of Smooth Muscle Fibres?

a) They bear a central single nucleus

b) These fibres are cylindrical in shape

c) They are present in internal organs

d) They are involuntary in nature



Two Bones Can Be Connected To Each Other By Another Type Of Connective Tissue Called The _____.

a) Tendons

b) Cartilage

c) Matrix

d) Ligament

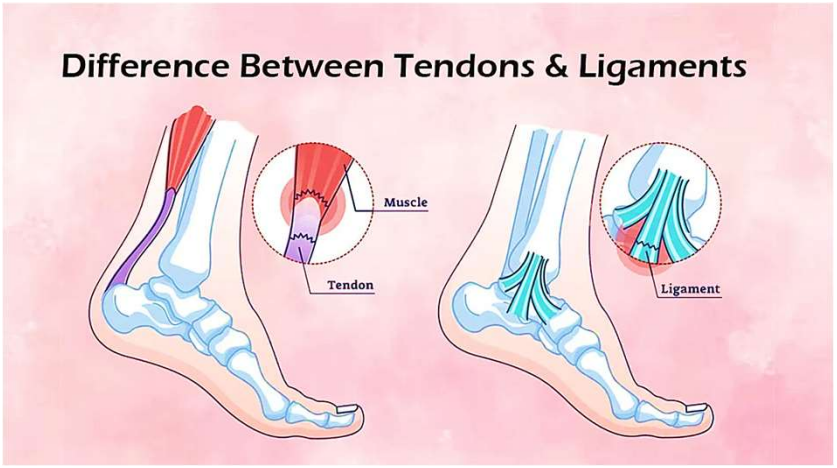
Two Bones Can Be Connected To Each Other By Another Type Of Connective Tissue Called The _____.

a) Tendons

b) Cartilage

c) Matrix

d) Ligament



- Ligament is the connective tissue which connects bone to bone.
- Tendon connects muscle to bone and fasciae connects muscle to muscle

The Storage Of Fats In Animals Occurs In Which Tissue?

a) Adipocyte

b) Reticulocyte

c) Osteocyte

d) Chondrocyte

The Storage Of Fats In Animals Occurs In Which Tissue?

a) **Adipocyte**

b) Reticulocyte

c) Osteocyte

d) Chondrocyte

- Adipocytes, also known as lipocytes and fat cells, are the cells that primarily compose adipose tissue, specialized in storing energy as fat.

Blood And Lymph Are Types Of

a) Permanent tissue

b) Connective tissue

c) Epithelial tissue

d) Muscular tissue

Blood And Lymph Are Types Of

a) Permanent tissue

b) Connective tissue

c) Epithelial tissue

d) Muscular tissue

- Connective tissue provides support, binds together, and protects tissues and organs of the body.

“Golden Rice" Is Rich In -

a) vitamin A

b) vitamin D

c) vitamin K

d) More than one of the above

“Golden Rice" Is Rich In -

a) **vitamin A**

b) vitamin D

c) vitamin K

d) More than one of the above

- Golden rice is rich in vitamin A. It contains good quantities of β-carotene, the precursor of vitamin A.The rice grains are yellow in colour due to presence of β-carotene, thus it is commonly called golden rice.

With Respect To Biotechnology, What Does M Stand For In GM Crops?

a) Moderate

b) Multiple

c) Modified

d) Mix

With Respect To Biotechnology, What Does M Stand For In GM Crops?

a) Moderate

b) Multiple

c) Modified

d) Mix

- GM crops, or genetically modified crops, are plants that have been genetically engineered using modern biotechnology techniques to introduce desirable traits or characteristics, such as resistance to pests, diseases, or environmental stress.

The First Transgenic Plant Used For Commercial Production Was

a) cotton

b) tomato

c) tobacco

d) rice

The First Transgenic Plant Used For Commercial Production Was

a) cotton

b) tomato

c) tobacco

d) rice

- The first genetically modified plant was produced in 1982, an antibiotic-resistant tobacco plant.

A Recessive Allele Is Expressed In

a) Homozygous condition only.

b) Heterozygous condition only.

c) Both homozygous and heterozygous conditions.

d) More than one of the above.

A Recessive Allele Is Expressed In

a) **Homozygous condition only.**

b) Heterozygous condition only.

c) Both homozygous and heterozygous conditions.

d) More than one of the above.

- Homozygous - It is the condition in which the pair of alleles determining a phenotype is identical, either both dominant or both recessive.

In A Plant, Red Fruit (R) Dominant Over Yellow Fruit (R) And Tallness (T) Is Dominant Over Shortness (T). If A Plant With RRTT Genotype Is Crossed With A Plant That Is Rrtt. Then

a) 25% will be tall with red fruit

b) 50% will be tall with red fruit

c) 75% will be tall with red fruit

d) All of the offspring will be tall with red fruits

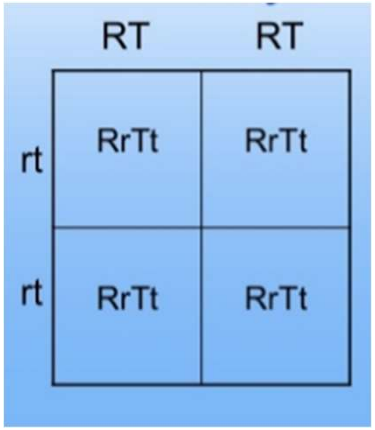
In A Plant, Red Fruit (R) Dominant Over Yellow Fruit (R) And Tallness (T) Is Dominant Over Shortness (T). If A Plant With RRTT Genotype Is Crossed With A Plant That Is Rrtt. Then

a) 25% will be tall with red fruit

b) 50% will be tall with red fruit

c) 75% will be tall with red fruit

d) All of the offspring will be tall with red fruits



What Is The Genotypic Ratio In A Monohybrid Cross ?

a) 4 : 2 : 1

b) 3 : 1

c) 1 : 2 : 1

d) 5 : 3

What Is The Genotypic Ratio In A Monohybrid Cross ?

a) 4 : 2 : 1

b) 3 : 1

c) 1 : 2 : 1

d) 5 : 3

F_1 Monohybrid Cross

- Trait: Seed Shape
- Alleles: R – Round r – Wrinkled
- Cross: Round seeds x Round seeds
- Rr x Rr

	R	r
R	RR	Rr
r	Rr	rr

Genotype: RR, Rr, rr

Phenotype: Round & wrinkled

G.Ratio: 1:2:1

P.Ratio: 3:1

When Mendel Cross-pollinated A Tall Pea Plant And A Short Pea Plant, In The F1 Generation

a) 50% of the progeny plants was short.

b) 75% of the progeny plants was short.

c) 100% of the progeny plants were short.

d) 0% of the progeny plants were short.

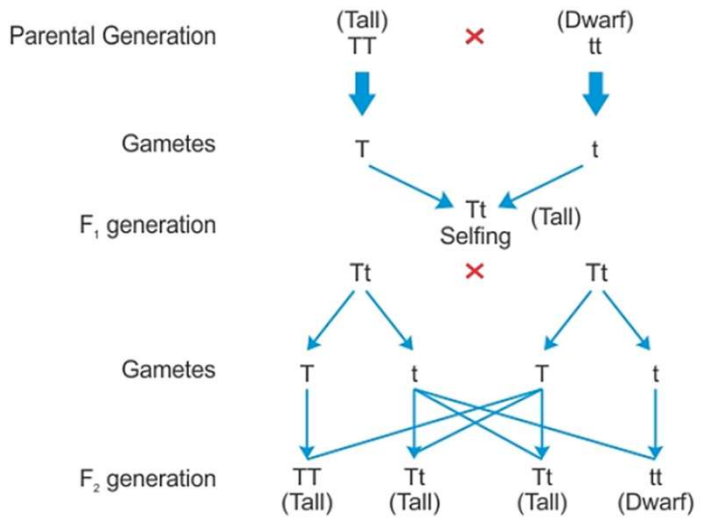
When Mendel Cross-pollinated A Tall Pea Plant And A Short Pea Plant, In The F1 Generation

a) 50% of the progeny plants was short.

b) 75% of the progeny plants was short.

c) 100% of the progeny plants were short.

d) 0% of the progeny plants were short.



In Pea, A Pure Tall Plant (TT) Is Crossed With A Short Plant (Tt). What Will Be The Ratio Of Pure Tall Plants To Short Plants In The F2 Generation ?

1 : 1

a) 1 : 1

b) 1 : 3

c) 3 : 1

d) 2 : 1

In Pea, A Pure Tall Plant (TT) Is Crossed With A Short Plant (Tt). What Will Be The Ratio Of Pure Tall Plants To Short Plants In The F2 Generation ?

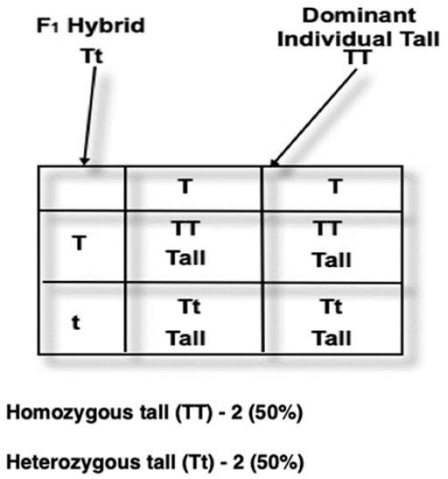
1 : 1

a) **1 : 1**

b) 1 : 3

c) 3 : 1

d) 2 : 1



What Is The Basic Unit Of Inheritance?

a) Cell

b) Mitochondria

c) Gene

d) Tissue

What Is The Basic Unit Of Inheritance?

a) Cell

b) Mitochondria

c) Gene

d) Tissue

- Gene is a basic unit of heredity and a sequence of nucleotides in DNA that encodes the synthesis of a gene product, either RNA or protein.
- Thus, Gene is the basic unit of inheritance

The camel's hump is a store of-

a) Water

b) Fat

c) Starch

d) More than one of the above

The camel's hump is a store of-

a) Water

b) Fat

c) Starch

d) More than one of the above

- Camels store fat in their humps.
- Camels use the humps to store energy-rich fat deposits allowing the gangly beast to travel days through the desert without stopping for a bite to eat.

DNA are composed only of:

a) Nucleic acid

b) Protein

c) Lipid

d) Altogether

DNA are composed only of:

a) **Nucleic acid**

b) Protein

c) Lipid

d) Carbohydrate

- Deoxyribonucleic acid (DNA) is a nucleic acid and is therefore made up of nucleotide.
- Each nucleotide consists of a phosphate group, a nitrogenous base (A, T, G, C), and ribose sugar (deoxyribose in case of DNA).
- A nucleoside contains only pentose sugar and a nitrogenous base

The human cell contains _____ chromosomes.

a) 46

b) 44

c) 48

d) 26

The human cell contains _____ chromosomes.

a) 46

b) 44

c) 48

d) 26

- In humans, each cell normally contains 23 pairs of chromosomes, for a total of 46.
- Twenty-two of these pairs, called autosomes, look the same in both males and females.
- The 23rd pair, the sex chromosomes, differ between males and females.
- Females have two copies of the X chromosome, while males have one X and one Y chromosome.

Which of the following set is the pyrimidines present in RNA?

a) Uracil and Cytosine

b) Adenine and Uracil

c) Guanin and Uracil

d) Thymine and Uracil

Which of the following set is the pyrimidines present in RNA?

a) **Uracil and Cytosine**

b) Adenine and Uracil

c) Guanin and Uracil

d) Thymine and Uracil

- Pyrimidine is one of two classes of heterocyclic nitrogenous bases found in the nucleic acids DNA and RNA.
- In RNA the pyrimidines are uracil and cytosine.
- In DNA the pyrimidines are cytosine and thymine.

The process of copying the genetic information on the RNA from one of the DNA is called _____.

a) Transcription

b) Transcoping

c) Transformation

d) Translation

The process of copying the genetic information on the RNA from one of the DNA is called _____.

a) **Transcription**

b) Transcoping

c) Transformation

d) Translation

- Transcription is the process of copying the genetic information on the RNA from one of the DNA.
- The process involves copying a gene's DNA sequence to make an RNA molecule.
- DNA safely stores genetic material in the nuclei of cells as a template.
- Transcription is carried out by an enzyme called RNA polymerase.

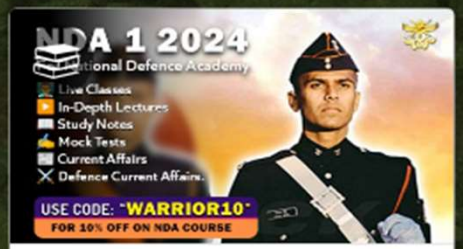
Choose from our Courses

SSB Interview Online Coaching 2023 - 2024

19 courses ~~₹9999~~ ₹6999

CDS Exam Online Coaching 2024

19 courses ~~₹7999~~ ₹5999



NDA Exam Online Coaching 2024

19 courses ~~₹7999~~ ₹5999

CDS Exam OTA Online Coaching 2024

18 courses ~~₹7499~~ ₹5499

AFCAT Exam Online Coaching 2024

18 courses ~~₹7999~~ ₹5999

Territorial Army Exam Online Coaching 2023

17 courses ~~₹7999~~ ₹5999

ACC Exam Coaching 2024

15 courses ~~₹5999~~ ₹4999

UPSC CAPF Assistant Commandant Online Cours...

27 courses ~~₹4999~~ ₹3999